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FSIS

United States Department of Agriculture

Food Safety and Inspection Service

News Bureau (202) 720-9113

November 1995

BACKGROUND

Mechanically Separated Poultry

The U.S. Department of Agriculture's Food Safety and Inspection Service is the Federal agency responsible for ensuring the safety, wholesomeness, and accurate labeling of meat, poultry, and processed egg products. In November 1995, FSIS announced the adoption of a new rule to amend the Federal poultry products inspection regulations to require mechanically separated poultry to be identified in the ingredients statements of hot dogs, bologna, and other processed products as "*mechanically separated chicken*" or "*mechanically separated turkey*" instead of simply "*chicken*" or "*turkey*."

Mechanically separated poultry (MSP) is a poultry product produced by high pressure machinery that separates bone from poultry skeletal muscle tissue and other edible tissue by first crushing the bone and then forcing bone and tissue through a sieve or a similar screening device. The result is a blend of soft tissue with a paste-like form and batter-like consistency. A small amount of powdered bone passes through with the soft tissue. The final paste-like material, used in formulating meat and poultry products, has a physical form and texture that differs materially from other boneless chicken and turkey products that are deboned by hand. FSIS believes consumers should be informed of this difference with a distinctive labeling term.

The new regulation on mechanically separated poultry prescribes a definition and standard of identity and composition, including requirements for bone solids content (measured as calcium content) and bone particle size; certain limitations for the use of MSP; and labeling requirements for MSP and for poultry products and meat food products containing MSP as an ingredient.

Background

USDA first addressed the use of mechanically separated poultry in meat and poultry products in 1969, when the bone solids content limit was established for boneless poultry products. In 1976, USDA initiated an analytical study to obtain data on nutrients and substances of potential health concern in mechanically separated poultry. The study, *Health and Safety Aspects of the Use of Mechanically Deboned Poultry*, was released in 1979 for review and comment.

In 1993, several red meat sausage manufacturers filed a lawsuit against USDA alleging that the differences in labeling requirements for mechanically separated red meat products (which already had to be labeled "*mechanically separated beef*" or "*mechanically separated pork*") and mechanically separated poultry products (which still could be labeled simply "*chicken*" or "*turkey*") gave poultry manufacturers an unfair advantage.

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CATALOGING PREP.

FSIS issued an advance notice of proposed rulemaking (ANPR) on June 15, 1993, asking for comments, scientific data, and recommendations on the definition and identification of mechanically separated poultry on labels. Of the more than 2,700 comments received, more than half supported identifying MSP on meat and poultry labels. FSIS issued another ANPR on March 3, 1994, soliciting more substantive comments and information from industry, the scientific community, academia, consumer groups, and other interested parties. The March 3, 1994, ANPR generated 106 comments with a majority of the commenters opposing the ANPR.

A proposed rule was published on December 6, 1994, with a 60-day comment period that was later extended to March 6, 1995. FSIS received over 2,400 comments, the majority of which dealt with the issue of the need for MSP labeling. The final rule was published in the Federal Register on November 3, 1995.

Reason for the New Rule

The new regulation—set to take effect in November 1996—will inform consumers that some boneless poultry products are made from a mechanical separation process. Because of its processing, texture, and characteristics, mechanically separated poultry is different from what consumers ordinarily think of as “*chicken*” or “*turkey*,” and a descriptive term should reflect this difference in the ingredients statement of products in which it is used. The change, as part of USDA’s initiative for more descriptive and accurate product labeling, will ensure that the labeling of poultry products provides consumers with the most accurate information available.

Since FSIS first conducted rulemaking regarding boneless poultry products in 1969, the amount of MSP being manufactured and the number and range of poultry products and meat food products in which it is used as an ingredient has increased significantly. Market estimates indicate that about one billion pounds of raw poultry can produce about 700 million pounds of mechanically separated poultry, which can be used to make about 400 million pounds of franks, bologna, and other poultry sausages, and about 300 million pounds of poultry nuggets and poultry patties.

Livestock product resulting from a similar mechanical separation and removal process is called “*mechanically separated beef*” or “*mechanically separated pork*” and is generically known as *mechanically separated meat* (MSM). MSM is a livestock product with a paste-like form and batter-like consistency that results from the mechanical separation and removal of most of the bone from attached skeletal muscle of livestock carcasses and parts of carcasses. MSM is subject to regulatory requirements, including a standard of identity and composition that defines the product and limits for bone solids content and bone particle size. The required name for MSM, i.e., “*mechanically separated beef*” or “*mechanically separated pork*,” differentiates it from “*beef*” or “*pork*.” MSM is also required to be separately identified in the ingredients statement of products in which it is used, and is subject to certain restrictions in its use.

When sausage manufacturers sued USDA in 1993, they claimed the disparate labeling terms for red meat and poultry produced by mechanical separation posed an unfair advantage for the manufacturers of mechanically separated poultry products. The Agency reviewed and reevaluated the existing regulations for MSP, particularly with regard to labeling issues about the product. FSIS concluded that regulatory action to more clearly identify MSP on product labels was necessary.

The term chosen to refer to this poultry product—“*mechanically separated*”—is recognized internationally by the Codex Alimentarius Commission of the United Nations and by individual countries that trade with the United States. The term has also been upheld in court decisions as appropriately distinguishing mechanically separated red meat (MSM) from hand deboned red meat.

“*Mechanically separated*” was chosen over other terms that were not considered appropriate—such as “*comminuted*,” “*finely comminuted*,” “*finely ground*,” and “*mechanically deboned*.” The terms “*comminuted*,” “*finely comminuted*,” and “*finely ground*” have been applied commonly and interchangeably in the past to poultry produced by both hand deboning and mechanical deboning and do not distinguish between boneless poultry products produced by mechanical separation and boneless poultry products produced by traditional methods, such as hand deboning. The term “*mechanically deboned*” was not chosen because FSIS believed that this term would incorrectly represent to consumers that the product does not contain bone.

What Is Mechanically Separated Poultry?

Mechanically separated poultry (MSP) is a poultry product made from starting materials that include backs, whole and half carcasses, and parts of chickens and turkeys from which most of the muscle and other edible tissue has been removed by hand, leaving bits and pieces of tissue adhering to skeletal frames and carcass “shells.” The nature of these starting materials—which may be raw or cooked with varying amounts of muscle, skin, and fat—is such that the muscle and other tissue that remains on the bones cannot be efficiently or effectively removed using hand deboning techniques.

The starting materials are fed into a mechanical deboning or separation machine and are pushed under high pressure through the part of the equipment with small openings, or apertures. Most of the bone is separated and removed. However, under the high pressure applied by the machine, the apertures allow a small amount of powdered bone to pass through with the edible tissues, which become a homogeneous soft tissue mass.

The minute amount of powdered bone (particles much smaller than the size of pepper and limited to no more than one percent) is dispersed throughout the soft tissue mass. The remaining bony residue that has been separated from the paste-like muscle and other tissues is not edible and exits from a separate place on the equipment. Thus, such machines mechanically separate and remove most of the bone from the starting materials, resulting in a product with a paste-like form that is comparable in consistency to a cake batter.

The product may contain varying amounts of muscle and/or skin (with or without attached fat) and kidneys from young chickens and turkeys. If skin is present at levels greater than that which occur naturally on the carcass, the presence of skin must be labeled (e.g., “*mechanically separated chicken, skin added*”). Kidneys and sex glands from mature chickens or turkeys may not be used as human food. Lungs also cannot be used in any processed poultry product.

Thin membranes that have not yet developed into sex glands in young poultry are typically part of poultry carcasses sold to consumers today, and therefore may be present in mechanically separated poultry products. Their presence is not labeled because the tissue of immature sex glands is virtually indistinguishable from other edible poultry tissue and presents no health or safety concerns.

The regulation limits the bone solids content of mechanically separated poultry to no more than one percent, consistent with the restriction for all other boneless poultry products. At least 98 percent of bone particles can be no greater than 1.5 millimeters (mm) and no bone particles can be larger than 2.0 mm in any dimension. These size limitations are in accord with good manufacturing practices for mechanical separation operations and are not deemed to pose any hazards to consumers. FSIS will require producers of MSP to comply with requirements for bone solids content and bone particle size and will implement checks for compliance.

Use, Identification, and Labeling of Mechanically Separated Poultry as an Ingredient

MSP will generally be allowed as an ingredient in processed poultry and meat products, including whole muscle poultry products such as roast turkey breast. However, FSIS believes that the *names* for these products should be as informative as possible by conveying to the consumer, perhaps through use of a qualifying statement, that the product is not composed of entirely intact whole muscle, as may be expected. The Agency will be assessing for possible future policy development the broad issue of the appropriate naming of these products.

The final rule specifies the following restriction on the use of MSP as an ingredient: Poultry products containing MSP identified as being prepared from a particular kind of poultry (e.g., chicken) are not permitted to contain MSP of any other kind (e.g., mechanically separated turkey).

Some policies on the use of mechanically separated poultry as an ingredient that will continue under the new rule include the following:

- Products such as "*beef and turkey chili*" can contain up to 49 percent mechanically separated poultry, which will now be identified as mechanically separated poultry in the ingredients statements.
- Up to 15 percent of the total ingredients, excluding water, in frankfurters and bologna can be mechanically separated poultry, which will now be identified as "*mechanically separated chicken*" or "*mechanically separated turkey*" in the ingredients statements.
- Chicken and turkey franks can contain 100 percent mechanically separated poultry, which was formerly labeled "*chicken*" or "*turkey*" in the ingredients statement and which will now be declared as "*mechanically separated chicken*" or "*mechanically separated turkey*."

Effective Date

In order to diminish the cost burden on manufacturers of relabeling the product, FSIS has established November 4, 1996, as the effective date for the final rule, one year from its date of publication. During this time, it is expected that manufacturers will make appropriate modifications to the ingredient statements on their product labels.

For More Information

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